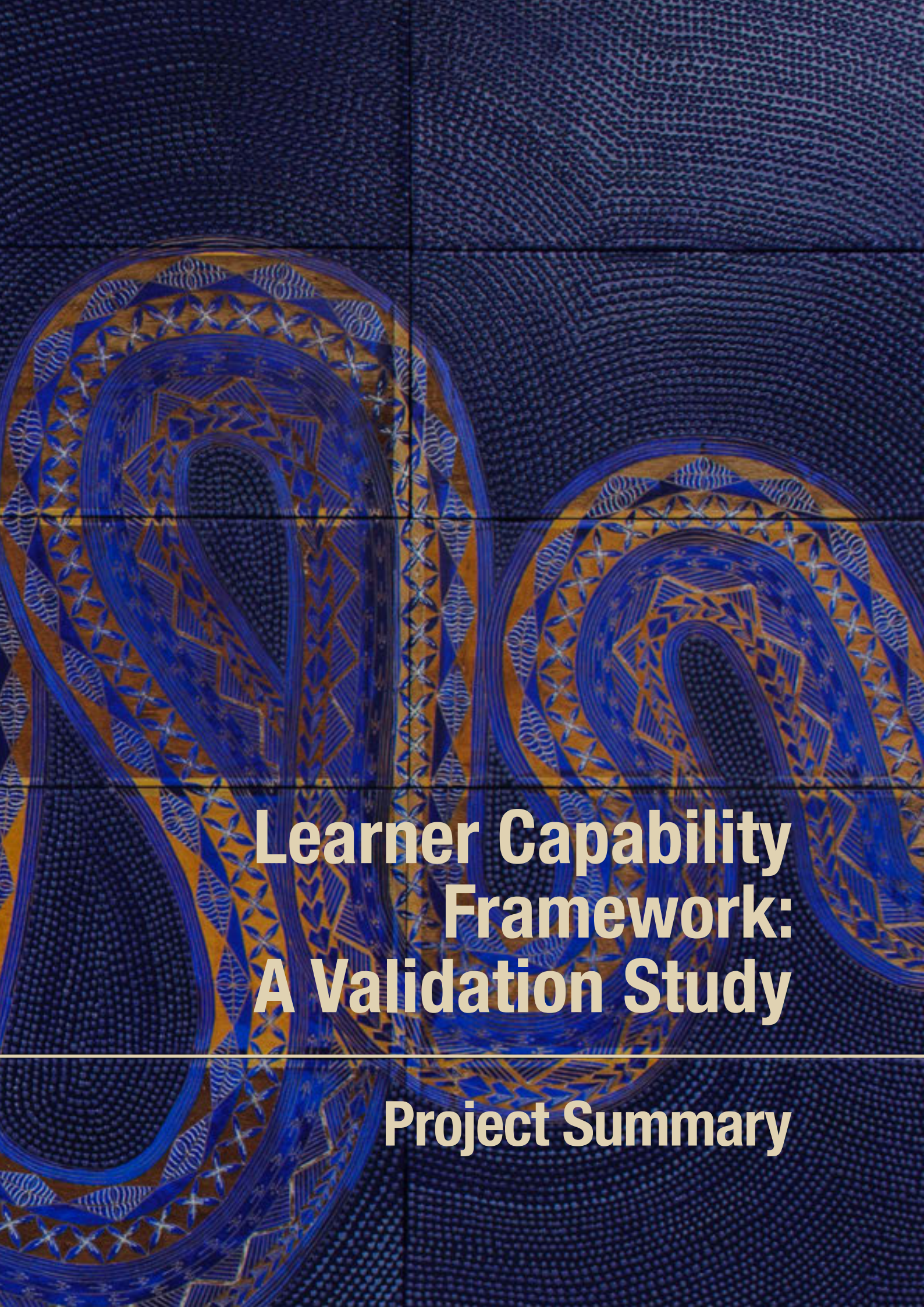

Learner Capability Framework: A Validation Study

Project Summary

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Project Summary

Front Cover Image: Ana Teofilo. *Journey Part Two*, 2013.
Mixed media on painted and carved board. 2 x 4, (detail).

OTAGO POLYTECHNIC Te Kura Matatini ki Otago

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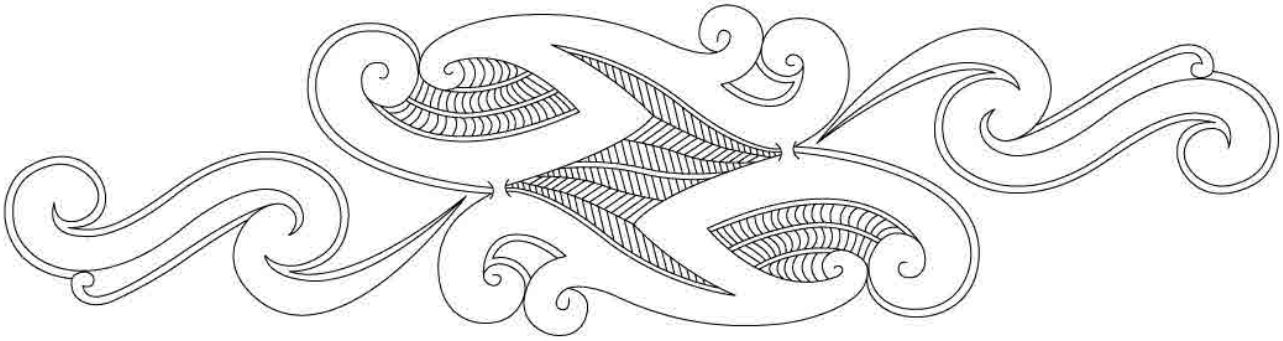

Kotahitaka (Unity)

Artist Dana Te Kanawa (née Russell), Kāi Tahu

The overall pattern brings together landscape, seascape, Kāi Tahu, Otago Polytechnic and the people from all of the places that come here to study. It symbolises unity and togetherness.

Acknowledgements

Otago Polytechnic acknowledges the valued support from Ako Aotearoa for this project. Without their support this project would not have extended to the scope and range that it has in providing an investigation of the relationship between capabilities and vocational education outcomes for learners and educators.

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Special notes of acknowledgement for Dr Barry Law and Dr Behnam Soltani from the Otago Polytechnic Auckland International Campus (OPAIC), whose initial research to develop what capabilities in our setting might look like was undertaken in 2017. The research data they gathered was to be used to identify appropriate interventions and strategies to help redesign curriculum content to ensure Otago Polytechnic produce capable, work ready and globally employable graduates.

The findings of this Auckland pilot resulted in what has become known as the *iamcapable* project. It formed the basis for a validation process that has come to be known as the Learner Capability Framework tool, through which a more extensive investigation into learner capability and its impact on developing employable graduates for the changing nature of work has been possible.

A very sincere and special thank you to all the employers, stakeholders, staff researchers, transcribers, administrators, students, and alumni who took part in this study, shared their experiences and helped us to gain some understanding of how to develop and implement a Learner Capability Framework. The findings of this ambitious research project will go on to support learners in gaining the capabilities recognised by the workforces they wish to enter, as real, relevant and important.

This research report is a result of a team project undertaken by Leoni Schmidt, Michael Greaves, Liz Ditzel, Amber Paterson, Rhina Chan and Andy Kilsby.

Summary author
Professor Liz Ditzel
30 June 2020

The full project details are contained in the Learner Capability Framework: A Validation Study Project Documentation.

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Learner Capability Framework: A Validation Study

Project Summary

Executive summary

What learner capabilities contribute to graduates' work readiness?

The Learner Capability Framework (LCF) is a matrix of 25 (a 26th was later added) capabilities or transferable skills, e.g., the ability to effectively communicate, that contribute to a graduate's work-readiness. The Learner Capability Framework works in combination with *iamcapable,* a web-based platform that serves as an online repository of evidence of meeting a behavioural competency.

Research purpose

While all capabilities contribute to learner success and employability, the purpose of this two-year action research project was to validate the Framework and identify the most important capabilities for graduates' work readiness.

Research aims and questions

1. To identify and validate the most significant capabilities that employers seek in their potential employees for graduate level positions.

   RQ 1: Which capabilities are priorities for employers and stakeholders when they consider graduates as employees?

2. To design interventions and strategies to implement capabilities into courses and curriculum content.

   RQ 2: What can Otago Polytechnic provide to enhance learner capabilities?

Action research method

The project was conducted using an action research methodology by a research team at Otago Polytechnic (OP) Dunedin Campus. It received Otago Polytechnic Research Ethics Committee approval and Ako Aotearoa national research funding.

The study was conducted in six phases:

Phases 1 & 2:

Data was gathered from employers and stakeholders (N=163) over six months by 51 Otago Polytechnic staff researchers trained to use a structured interview format. Interviewees were asked to select and rank the top ten capabilities for graduates entering their workplace and provide an example for each one. This produced data called the Employer Priorities Index.

Phase 3:

Data was gathered from Otago Polytechnic alumni (N=389) via an open-ended online survey that contained a link to consent to a phone interview.

Phases 4-6:

Feedback was gathered from staff and students who were using the Learner Capability Framework in their courses. Information was collated into a synthesis report as a mid-point summary of the first year's research.

Phase7:

Learner Capabilities were mapped and implemented into Course Curricula and Assessments.

Phase 8:

To gain a Kaupapa Māori perspective, data was gathered from staff (N=17) at Arai Te Uru Kōkiri Training Centre via interviews to gain input from Māori education providers about capabilities' relevance to Māori.

Phase 9:

Data was gathered from the local Otago Southland Employers' Association members (N=14) via an open-ended online survey. A small number of staff (N=18) and students (N=6) were interviewed to gain additional feedback about using the Learner Capability Framework and *iamcapable* tool.

Contextual factors

The action research method allowed the researchers to adapt research plans in response to two significant environmental factors experienced over the two years.

1. In 2019, the Review of Vocational Education (ROVE) created uncertainty for staff about future employment and requirements for course design and delivery. For students, uncertainty about their study plans and transition to the New Zealand Institute of Technology (NZIST, recently named as Te Pūkenga).

2. In late March 2020, the COVID-19 pandemic disrupted the delivery of education programmes, forcing staff to switch to online teaching or defer practical course work, and for students to stay or return home to continue their study online for extended periods.

Findings

RQ 1: Employer Priority Index capability rankings:

There was a consensus about the top ranked capabilities for graduates across the three stakeholder groups surveyed. The most significant capabilities are:

- Communicates Effectively Verbally,
- Displays Effective Interpersonal Behaviour,
- Works in Teams,
- Solves Problems,
- Works Independently,
- Communicates Effectively in Writing,
- Organises Effectively, and
- Demonstrates Resilience.

The findings highlight the importance of having effective verbal and written communication and interpersonal behaviour skills when entering the workplace.

RQ 2: Strategies to enhance learner capabilities:

- Student feedback provided a range of suggestions about enhancing capabilities, such as using more real-life scenarios, providing more internships and work experience, many of which are already used in courses and curriculum design.
- Alumni ideas for empowering students in the learning environment and providing more opportunities for personal growth outside the classroom included spending more time doing collaborative work or projects in the community and having smaller groups.
- Māori interview themes included different interpretations of capabilities relating to cultural competency, safety, and diversity in a Kaupapa Māori context. Translating the capabilities into Te Reo enhanced the understanding of capability in the Kaupapa Māori context.
- Research team recommendations focused on practical aspects such as greater preparation of staff for change by including them in the process via more workshops, seminars, and demonstrations to engage interest.

Conclusion

Findings validated that the Learner Capability Framework is 'fit for purpose,' providing confidence that Otago Polytechnic can continue to implement Learner Capabilities into curricula.

Among the groups surveyed the most important capabilities for successful graduate entry into the workplace were: 'Communicates Effectively Verbally', 'Displays Effective Interpersonal Behaviour', 'Works in Teams', closely followed by 'Solves Problems', 'Works Independently', 'Communicates Effectively in Writing', 'Organises Effectively', and 'Demonstrates Resilience'.

There was no evidence that the capabilities differed substantially from a Kaupapa Māori perspective.

For educators, these findings emphasise the importance of developing curricula, and teaching and learning methods that focus on verbal communication skills, interpersonal behaviour, and teamwork.

For learners, the findings highlight the importance of being able to provide prospective employers with evidence of these capabilities, by using the *iamcapable* tool which proved to be an effective and convenient way to track and share verified evidence of capability development.

Introduction

Employers continue to express the need for workers who have a range of transferable skills, variously called 'soft skills', 'enterprise skills', or simply 'capabilities' (Archer & Williamson, 2008; McIntosh, 2017). Similarly, job seekers are required to provide evidence of capabilities to successfully gain employment in today's rapidly changing employment context (Belt, Drake & Chapman, 2010; Bull, 2015; Chaudhuri & Cabau, 2017; Waltz, 2011). However, the terms 'capability' and 'competency' are often used interchangeably, creating confusion for employers, educators, and job seekers (York, 2006).

In this research, competency is seen as relating to the job or role-specific tasks or outcomes required in some occupations, or that may be mandatory for professional groups as with Nursing, Occupational Therapists or Midwives. Capability sits more in the context of the personal, intrapersonal, and cognitive functions of the person undertaking an employed role while adequately fulfilling the many variables associated with working across teams, jobs and environments (both analogue and digital) in which employees find themselves (Scott, Chang & Grebennikov, 2010).

The focus of this study is to acknowledge and understand capability as an additional value or augmentation of an employee's competency in a particular skill area, thereby enhancing for example, a graduate's employability. In this project, the following definition of learner capabilities is used.

> [Learner capabilities are] "a set of achievements – skills, understandings and personal attributes – that make graduates more likely to gain employment and be successful in their chosen occupations, which benefits themselves, the workforce, the community and economy" (Yorke & Knight, 2006, p. 3).

The Learner Capability Framework

Research to develop what capabilities might look like in the tertiary sector was first undertaken by Dr Barry Law and colleagues at Otago Polytechnic's Auckland International Campus (OPAIC) in December 2016. The researchers interviewed 170 local and regional employers and from these data identified 25 capabilities or transferable skills that were required of graduates[1] entering their trade, profession, or workplace (Law, Wagg & Terry, 2016).

This matrix of capabilities is called the Learner Capability Framework[2]. Each capability is depicted by an icon and description of the required behavioural indicators. An example of Learner Capability 14 'demonstrates resilience' follows.

Demonstrates Resilience

1. Maintain wellness and apply personal strategies to response to pressure of time, workload, conflict, and work-life balance.
2. Persevere and learn constructively through challenges and mistakes. Constantly re-evaluate and establish the best course of action.
3. Maintain optimism, perseverance, and flexibility in uncertain, high risk or complex situations. Reduce personal and team stress, conflict, and negative impacts.

The results of the OPAIC pilot study were presented at staff workshops in November 2017 and February 2018. The Auckland research findings established the importance of industry-institute collaboration, validated the Learner Capability Framework with employers and reinforced the need for tertiary institutions to respond to industry demand. The success of the workshops and staff interest in using the Learner Capability Framework in their courses led to a study of selected degree and diploma programmes offered at Otago Polytechnic's Dunedin campus. In this report a programme is a designated path of study, e.g., a bachelor's degree would typically be a three-year programme of study made up of a prescribed number of credits at each year and level of study.

The Learner Capability Framework works in conjunction with iamcapable, a web-based platform that serves as an online repository of evidence of meeting a behavioural competency. Examples of academic course work, e.g., assignments, images, certificates, etc., and other material such as training certificates, letters, and awards can be shared by students with a potential employer through their iamcapable user profile. On request, academic staff can view and provide a verification 'tick' for academic documents.

© iamcapable 2019

Figure 1. iamcapable icon.

[1] In this report, graduates include those having completed diplomas and degrees at Levels 1-10.
[2] The full Learner Capability Framework is provided in Appendix 1.

Research methodology

Research purpose and questions

The purpose of the Dunedin study was to validate and implement the Learner Capability Framework among a larger stakeholder and student cohort. Ethics approval was gained from the Otago Polytechnic Research Ethics Committee (OPREC 2019-application number 706) after consultation with Kaitotohohu[3]. Two minor modifications to the research method were covered by amendments to the project (OPREC 2019-706a, 706b). The study had two aims and research questions (RQ).

1. To identify and validate the most significant capabilities that employers seek in their potential employees for graduate level positions.

   RQ 1: Which capabilities are priorities for employers and stakeholders when they consider graduates as employees?

2. To design interventions and strategies to implement capabilities into courses and curriculum content.

   RQ 2: What can Otago Polytechnic provide to enhance learner capabilities?

Research method

The study used an action research methodology defined as:

> "a collaborative activity among colleagues searching for solutions to everyday, real problems experienced in schools [or other learning institutions] or looking for ways to increase student achievement" (Ferrance, 2000, n.p.).

This method required the research team to meet regularly, discuss and respond to feedback and findings as the study progressed. It provided the flexibility to pivot the research plan and modify methods in response to two major environmental changes:

- First in 2019, the Review of Vocational Education (ROVE) created uncertainty for staff about future employment and requirements for course design and delivery. For students, uncertainty about their study plans and transition to the New Zealand Institute of Technology (NZIST, recently named as Te Pūkenga).

- Second, in late March 2020, the COVID-19 pandemic disrupted the delivery of education programmes, forcing staff to switch to online teaching or defer practical course work and for students to stay or return home to continue their study online for extended periods.

[3] Otago Polytechnic's Māori Development and Kaitohutohu Office.

Design

The research was conducted from February 2019 to November 2020 in six phases as shown in Table 1. The reader is referred to the *Learner Capability Framework: A Validation Study Project Documentation* publication that accompanies this summary for full details of each stage. The relevant chapter for each stage is listed in Table 1.

Phase	Purpose	Learner Capability Framework: A Validation Study publication
Phases 1 & 2	To validate and prioritise the 25 Learner Capabilities by interviewing employers and stakeholders.	Learner Capability Framework (pp. 1-10). Learner Capability Framework: Employer Priorities Index (pp. 11-34). Learner Capability Framework: Field Research Toolkit (pp. 35-58). Learner Capability Framework: Employer Transcript Analysis Report (pp. 59-142).
Phase 3	To collect feedback from alumni about capabilities through a Facebook survey and follow-up interviews.	Learner Capability Framework: Alumni Survey and Interview Analysis (pp. 143-234).
Phases 4-6	To explore staff and student impressions and collect feedback about the Learner Capability Framework and roll-out of the *iamcapable* tool.	What does it take to produce New Zealand's most employable graduates? (pp. 213-134). Learner Capability Framework: Staff and Student Feedback (pp. 235-260).
Phase 7	To map and embed Learner Capabilities into course curricula.	Implementing the Learner Capability Framework (pp. 261-292).
2020 – influenced by COVID-19 pandemic		
Phase 8	To gain input from Māori education providers and staff at the Kōkiri Training Centre about capabilities' relevance to Māori.	Learner Capability Framework: Kōkiri Training Centre Employer Responses (pp. 293-306).
Phase 9	To gain feedback from the Otago Southland Employers' Association, staff and students who were using the Learner Capability Framework and *iamcapable* tool.	Learner Capability Framework: Otago Southland Employers' Association Response Analysis (pp. 307- 320).

Table 1. Research phases and publications.

Research team

The project was overseen by Andy Kilsby, Director of Employability. Professor Leoni Schmidt provided academic leadership and Rhina Chan, administrative assistance. Amber Paterson, Learning and Teaching Development Specialist, led the roll-out of the *iamcapable* tool and provided training sessions for staff using the Learner Capability Framework. Michael Greaves conducted interviews with alumni, students and selected staff members of the Arai Te Uru Kōkiri Training Centre and Otago Polytechnic. Dr Griffin Leonard thematically analysed the interview transcripts which were typed by independent contractors. D'Arcy Dalzell interviewed staff who were using the Learner Capability Framework and led a two-day workshop to synthesise the first year's research findings. Professor Liz Ditzel conducted some interviews, attended research meetings, collated information, assisted others to write and submit progress reports and compiled the final research report. Various research team members led or contributed to writing the research publications.

Research phases and results

This report presents a synopsis of the research undertaken over two years. As previously mentioned, the relevant chapters of *Learner Capability Framework: A Validation Study Project Documentation* provide full details of the research design, methodology and results for each phase. Chapter 1 provides an overview[4].

Phases 1 & 2: Employer and stakeholder interviews

The study began by addressing employers' understanding of capability in the workplace. The aim was to validate the 25 Learner Capabilities identified from the OPAIC pilot study to determine how they related to industries and destination areas for Otago graduates. Otago Polytechnic staff were invited through a recruitment e-mail to be involved in this project, with a link to further information. Individuals who volunteered attended a training workshop to learn and practice the required interview protocol and procedures. Researchers were issued with a hard-plastic A4 document file that clipped shut to keep contents together for safe return to the project administrator at the completion of each interview or set of interviews[5].

Interviews were conducted from March to June 2019, mainly at the employer's workplace. Those not based in Dunedin were interviewed by telephone, Skype, Zoom or Microsoft Teams technology. The scale and scope of the phase 1 research is shown in Figure 2.

Figure 2. Overview of phase 1 research process.

4 See Chapter 1: Learner Capability Framework: Research Project, pp. 1-10.
5 See Chapter 2: Learner Capability Framework: Field Research Toolkit, pp. 35-58.

In total, eight research training workshops were held; 51 staff conducted 163 semi-structured interviews with employers and stakeholders from 331 organisations. The large number of organisations required data to be grouped into 'clusters' representing 15 programme areas shown in Table 2.

Programme Clusters	No. of Interviewers	No. of Employers
Applied Science (Sports)	4	10
Architecture	2	7
Business	5	21
Design - Communication	2	6
Design - Fashion	3	10
Design - Food Institute	2	7
Design - Product	3	6
Engineering Technology	2	9
Information Technology	3	11
Midwifery	6	13
Nursing	5	19
Occupational Therapy	4	10
Quantity Surveying	2	8
Social Services	4	13
Visual Arts	4	13
	51	163

Table 2. Interviews conducted in programme clusters.

Employer Priority Index results

Each interviewee was shown a set of laminated cards representing the 25 Learner Capabilities. They were asked to select and rank the top 10 capabilities for graduates entering their workforce. Data collected from this activity were collated to produce a summary (known as the Employer Priorities Index) of the top 10 rankings for each programme cluster[6].

Employer interview themes

Interviewees were also asked to give examples of what capabilities 'look like' in their specific workplace[7]. This thematic data was used to contextualise the Employer Priority Index rankings. Table 3 shows the top four ranked capabilities for employers in the Bachelor of Science (Sports) cluster. Each capability is illustrated by a quotation taken from the interview transcripts.

Rank	Capability	Employer quote
1	Communicates Effectively in Writing	"Texting, emails, programmes and that type of communication, it's in a secondary role. So, they have to know how to write those properly, as in professional processes. You know, for us it has to be a professional process across the board" (Interview 4, Lines 13-19).
2	Demonstrates Resilience	"…not letting their experiences with my students affect the rest of their day. I understand that sometimes my students can present themselves in a bit more of an intimidating way, and if the Polytech students aren't quite used to that, then having the ability to not let it affect themselves and put themselves off coming back the next week" (Interview 1, Lines 106-110).
3	Practices Ethically	"I treat everybody exactly the same and I do not tolerate anybody who doesn't… [It means] first of all, treating everybody exactly the same, like regardless of race, colour, religion, people are people" (Interview 9, Lines 68-70). "You have to have certain values that they can bring to the table, so values of theirs, it can't be my values, it's got to be theirs. It's a product that they're going to build or a brand that they're going to build, so they have to have their values. So, that covers honesty, punctuality, and that type of stuff, you know they have to have those" (Interview 4, Lines 23-26).
4	Acts Responsibly	"… your behaviour – it reflects on everything you do. So, if you go out on a Saturday night and make a bit of mess of yourself and a bit of a fool of yourself, that reflects quite badly on our business…with my staff, before I hire them, I say look, our expectations are not just that you live a clean and healthy life style in our space, I can't tell you what to do outside of our space, but you are starting to represent what we have here outside of this space, so please be mindful of that" (Interview 9, Lines 118-142).

Table 3. Capability examples for Sports graduates.

[6] See Chapter 1: Learner Capability Framework: Employer Priorities Index, pp. 10-33.
[7] See Chapter 3: Learner Capability Framework: Employer Transcript Analysis Report, pp. 59-142.

Overall Employer Priority Index results

To gain an overall picture of capability rankings across the 15 programme clusters, additional analyses of the Employer Priority index rankings were conducted. These results are shown in Table 4.

Rank	Capability	N
1	Solves Problems	14
	Works in Teams	14
2	Communicates Effectively Verbally	13
	Displays Effective Interpersonal Behaviour	13
	Organises Effectively	13
3	Communicates Effectively in Writing	11
	Thinks Critically	11
4	Acts Responsibly	9
5	Demonstrates Resilience	8
	Reflects on Performance and Applies Personal Learning	8
6	Thinks Creatively	7
	Works Independently	7
7	Displays Cultural Competence	6
8	Practices Ethically	5
	Practices Health and Safety	5
9	Demonstrates Digital Competence	4
10	Communicates Effectively Visually	2

Table 4. Overall Employer Priority Index results - Top 10 ranked capabilities.

Table 3 shows that 'solves problems' and 'works in teams' were rated equally as the top two capabilities for all programme clusters. Note the tally (N) is 14 because this capability was not among the top 10 ranked for two clusters.

Summary

Phase 1 research involved 51 staff who conducted 163 interviews with employers and stakeholders from a sample of 331 organisations. Data was grouped into 15 'clusters' representing 15 programme areas. Overall, the top ranked capabilities for graduates entering the workforce were 'solves problems' and 'works in teams'. These results validated the relevance of the Learner Capability Framework for Dunedin stakeholders giving the research team confidence that it was valued by employers and effective for students.

Phase 3: Alumni survey and interviews

Phase 2 explored the relevance of capabilities to another group of stakeholders, alumni, i.e., past graduates of Otago Polytechnic.

A recruitment video inviting alumni from a five-year span (2013-2018) to complete a short online survey was posted on the institution's Facebook page. The survey included a link to the Learner Capability Framework documents. Respondents were asked to select and electronically rank the 10 capabilities most valued by employers and other stakeholders from their industry or profession. The survey included two open-ended questions; the first inviting ideas about how the institution might better assist current learners with capability development in their studies, the second eliciting suggestions about additional or new capabilities required to better equip graduates to cope with workplace changes. It ended with a link where alumni could consent to further participation in a short online or phone survey.

Alumni survey results

Nearly four hundred (N=389) alumni completed the survey. Table 5 presents the top 10 ranked capabilities alumni consider relevant to their industry or profession.

Rank	Capability	N
1	Communicates Effectively Verbally	15
2	Displays Effective Interpersonal Behaviour	14
	Works Independently	14
3	Works in Teams	13
4	Communicates Effectively In Writing	12
5	Organises Effectively	11
6	Solves Problems	10
	Thinks Critically	10
7	Thinks Creatively	7
	Displays Cultural Competence	7
8	Practices Health and Safety	6
	Communicates Effectively Visually	6
	Displays Leadership	6
9	Acts Responsibly	5
	Demonstrates Resilience	5
10	Demonstrates Digital Competence	4

Table 5. Alumni - Top 10 ranked capabilities.

After completing the online survey, 41 alumni agreed to provide further information: 13 by phone and 28 by an online survey[8]. Additional questions related to respondents' experiences of how capabilities connect with workplace roles and perceptions of the changing nature of their workplace.

[8] See Chapter **4**: Learner Capability Framework: Alumni Survey and Interview Analysis, pp. 143-234.

Alumni interview results

Responses indicated that capability means different things to different people and in different contexts. It appeared that capabilities as a set of soft skills are applied in very different ways depending on the participants' distinction between competency and capability. Ideas of passion, professionalism, maturity, attitude, and work ethic were regarded as integral to demonstrating capability in the workplace. Positive comments for OP praised the high staff commitment and support for learners. Reflecting upon experience, many alumni thought that "OP does a fantastic job at preparing students for the real world" (IT respondent 12) and "the support [I] received from my facilitator during my studies was excellent and I hope this support is maintained for all students" (Business respondent 36). Less favourable comments included:

> "When I graduated there was no after graduation care or help with work placement. This has meant that I have had to rely on my experience for my current job role. This has made my diploma essentially irrelevant" (ETT Respondent 8).

Suggestions for implementing capability development through academic course work and curricula design are presented in Table 6.

Theme	Quotation – example
Teamwork/ collaboration	"Provide more group projects, but always check that all group members are contributing equally. sometimes, the group leaders are the only ones who feel responsible to complete the projects. This is also to check if students are being organised" (Business respondent 87).
Student wellbeing	"I believe it's important to ensure students are taking care of their wellness needs so they can be fully engaged and getting the most out of their classes. A good tip I was given as a student at OP was to take Vitamin D3, it helped to prevent those dreaded 'Dunedin blues' during the gloomy winter months. I was also incredibly thankful for always having oats and milk available in the OISA kitchen on those weeks where I was short on money" (Applied Science and Sport respondent 50).
Student empowerment and leadership	"Opportunities for students to identify an area they need to develop and allow them to focus on learning/developing this skill for a module/ assessment…Encourage students to take responsibility for their personal growth outside of the classroom as well as inside of it" (Applied Science and Sport respondent 11).
Different needs for different demographics	"Being a distance student was difficult, not having a strong knowledge as to how to access the library, which would have helped...Not having access to a peer group was tough, though I did have a good tutor who was in touch regularly and gave good advice" (Business respondent 26). "A lot more help for mature students who don't have digital capabilities" (Visual Arts respondent 140).

Table 6. Alumni suggestions - Capability development.

Summary

Alumni responses (N=389) prioritised the need for graduates to 'communicate effectively verbally'. This was followed by the ability to 'work independently' and 'display effective interpersonal behaviour'. Interview themes provided suggestions about how the institution could develop capability through course work. Ideas for curricula design included more use of group projects, buddy systems, internships in academic programmes. Student well-being and support for distance students were also identified as areas for capability development.

Phases 4-6: Staff interviews

Embedding some and eventually all 25 Learner Capabilities into degree and diploma courses was key to the success of this project. However, informal feedback from staff to research team members indicated some Schools were not interested in embracing this change. Hence uptake was slow, so that at the beginning of 2019 only five degree and diploma programmes at the Dunedin campus were using some of the Learner Capabilities in course assessments.

To explore the perceived resistance and negativity to implementing the Learner Capability Framework by staff, two research team members conducted informal interviews with representatives from early adopters (Bachelor of Applied Science, and Early Childhood Education) and other Schools who had signalled an interest (Nursing, Veterinary Nursing, and Design) in embedding some of the Learner Capabilities into their course curricula[9].

Staff interview results

A summary of feedback from conversations with staff using the Learner Capability Framework includes the following themes.

Positive feedback

- *"Once you get started – it's easy to do"* – Some Schools (Veterinary Nursing) saw this as a great opportunity to apply a capability framework more formally and could see value in integrating capabilities into their programmes. Others thought it useful to map capabilities against field work placements (e.g., Sports, Applied Science).

Negative feedback

- *Communication gaps* – The bigger picture about the purpose and planned implementations was not clear or delivered in a way that fully resonated with staff. For some, the Learner Capability Framework and *iamcapable* tool appeared to be another 'great idea' that nobody knew about. A lack of clear information about what was expected from teaching staff and unrealistic workload and time allocations presented as barriers. It was perceived students would require help to properly upload capability evidence.

- *Lack of confidence in the Learner Capability Framework and/or the iamcapable tool*. While staff recognised employability as important for graduates, some thought job seeking through an online tool as a 'less human' way of engaging with employers. Others thought that this was a duplication of recording work-based skills and were negative about using another way of measuring employability.

- *Lacks relevancy* – Some occupational groups (e.g., Midwifery, Nursing, Occupational Therapy, Engineering) have professional competencies that a graduate must demonstrate. Thus, the Learner Capability Framework was regarded as a 'nice to have' not a 'must have' enhancement to employability. Staff also recognise that students do not need to double up if they already record evidence of competencies and employability.

[9] See Chapter 6: Learner Capability Framework: Staff and Student Feedback, pp. 235-260.

Summary

The research team met over two days in September 2019 to synthesise phase 1-3 results that incorporated staff feedback[10]. Key messages related to communication gaps and a lack of knowledge about the practicalities of using the Learner Capability Framework, particularly in degree programmes. It was apparent that staff and students required more practical support for wider adoption and use of the Learner Capability Framework and *iamcapable* tool.

Action research intervention

To address the communication issues and increase staff 'buy in' and engagement the following actions were taken towards achieving the second research aim.

- Amber Paterson's role was expanded to include time for mapping and implementation. More training sessions on the Learner Capability Framework were provided by visiting Schools, demonstrating to students how to log in and use the *iamcapable* tool, hosting open sessions via a Help Desk in the Hub (the central staff and student area).

- Several life-sized 'cut out' avatars of local employers were displayed in the Hub; each with an example of a workplace capability.

- A series of illustrated daily blogs posted on Tūhono, (the organisation's internal electronic staff communication message board) with examples of how Learner Capabilities related to course assessments in different disciplines were written to further publicise the capabilities. An example of 'communicates effectively visually' is shown in Figure 3.

These actions were aided by an increased effort to implement the Learner Capabilities into course curricula using the process next described in phase 7.

Figure 3. Learner Capability blog post.

[10] See Chapter 5: What does it take to produce New Zealand's most employable graduates? pp. 213-234.

Phase 7: Embedding Learner Capabilities into course curricula

At the beginning of 2019, five self-selected degree and diploma programmes at the Dunedin campus used some of the Learner Capabilities in course assessments. This increased slowly so that by the second semester, a further 25 programmes had embedded Learner Capabilities in their course assessments, encouraging students to use the *iamcapable* tool. To encourage more staff to use Learner Capabilities, a process for mapping the Learner Capabilities into existing course outlines and assessments was developed by Amber Paterson. These steps are outlined below.

- The first step of the mapping process involves a staff discussion and agreement about the relevance of the Learner Capabilities for the programme. In early research stages, the best matches related to smaller courses that do not have a regulatory body, such as the Diploma in Beauty Therapy.

- The second step involves mapping the Learner Capabilities (shown on the horizontal axis of Figure 4) against existing prescribed Graduate Profile Outcomes, i.e., the behavioural indicators and personal attributes expected of a graduate from a particular degree or diploma. Capabilities are also mapped against the Course Learning Outcomes, i.e., the behavioural indicators and personal attributes expected of a graduate from a particular degree or diploma, and the Course Assessments.

An example of the mapping process for the Bachelor of Applied Science 500 Level Course is shown in Figure 4.

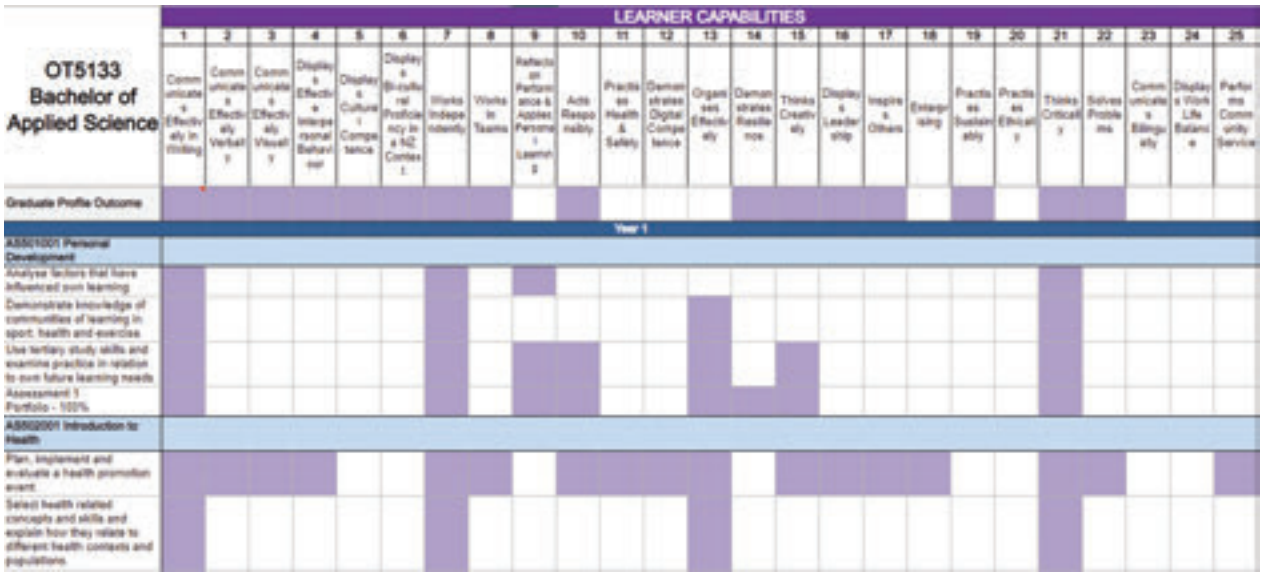

Figure 4. Capability mapping example.

In the example shown in Figure 4, all four Personal Development Course Learning Outcomes (shown on the vertical axis) match two of the Learner Capabilities 'communicates effectively in writing', and 'works independently'. Thus, students can upload Course Assessment examples into their respective ***iamcapable*** profiles as evidence of these capabilities. These supporting documents, (e.g., essay, blog post, project, email, letter, etc.) are verified electronically by staff, creating an online up-to-date record of achievement for students. Further examples are presented in the accompanying *Learner Capability Framework: A Validation Study Project Documentation* publication[11].

[11] See Chapter 7: Implementing the Learner Capability Framework, pp. 261-292.

Phase 8: Interviews with Arai Te Uru Kōkiri Training Centre staff

In the first phases of this research a representative selection of employment destinations was sampled. However, the relevance of a Learner Capability Framework for employers and graduates trained via Kaupapa Māori approaches to education was not captured by this approach. To address this, staff from the Arai Te Uru Kōkiri Training Centre, a Dunedin-based Kaupapa Māori training provider, were invited to participate in this research.

A participative relationship established through a consultation process from June 2019 to May 2020 involved researchers sharing understandings of the Learner Capability Framework, exploring ways in which it aligned with the Arai Te Uru Kōkiri Training Centre's aspirations for their students and their existing relationships with both employers and community groups. Candidates were selected by the Arai Te Uru Kōkiri Training Centre management and interviewed by staff member, Matt Kiore. While phase 1 methodology was followed, these interviews focused on how employers using a Kaupapa Māori approach in their work environment (or who employ graduates that have been trained via Kaupapa Māori approaches to education) view the Learner Capability Framework.

Arai Te Uru Kōkiri staff interview results:

Seventeen interviews were conducted[12]. The capabilities that interviewees found most important did not differ substantially from the previous Employer Priority Index results. The following quote supports the relevance of a Learner Capability Framework for Kaupapa Māori employers and graduates.

> "…you've got some really good things on there [the list of capabilities], it's just I've probably arranged a few things a wee bit out of tune but a lot of things there are, can be all one's and two's, they are all equally important" (Interview 14, Lines 215-217).

Opinion was split regarding the value of an online tool such as *iamcapable*. Most respondents thought the tool could be useful to many employers, if not to themselves specifically. Those who liked the notion of an online tool regarded it as an additional source of information for employers and a further opportunity for graduates to demonstrate their capabilities. Some appreciated that it would be visual in nature. However, with the emphasis on relationships within Te Aō Māori, moving recruitment processes to online platforms may disadvantage Māori and young professionals. Face-to-face interaction is culturally important as the interview processes offer chances for relationship-building in ways that digital tools do not.

Interview themes included different interpretations of capabilities relating to cultural competency, safety, and diversity in a Kaupapa Māori context. A summary of these interpretations supported by a quotation is presented in Table 7.

[12] See Chapter 8: Learner Capability Framework: Kōkiri Training Centre Employer Responses, pp. 293-306.

Cultural Competence, Bi-cultural Proficiency and Bilingualism	"Yes, te reo, nga tikanga, kaupapa Māori, they are all inter-related, it's hard to find a person with lots of tikanga and no reo, they kind of, they go hand in hand…" (Interview 11, Lines 72-73). "The thing for me when I'm working with people is about understanding what their own cultural values and beliefs are no matter what ethnicity they identify as, and that allows me to reflect and think about my own values and beliefs and how I need to respond in that and work alongside that person, on a daily basis really" (Interview 10, Lines 243-246). "If they don't have a handle on the whakapapa [of our organisation] then they may not contribute as much as we would like them to… It's the approach, it's the heart, it's the heart of what they do" (Interview 2, Lines 66-73).
Cultural safety	[cultural safety] Is knowing that actually I can go to my kaumatua, I can go to the … we've got people who can support us in our tika if we are ever not sure, so it might be around iwi validation or connecting with our whakapapa" (Interview 1, Lines 538-541).
Diversity	"I believe that everyone's input is really, really important and collectively you can make some really sustainable decisions if it's done collectively rather than just someone doing it on their own" (Interview 10, Lines 250-255).

Table 7. Arai Te Uru Kōkiri interview themes.

Summary

Overall, these findings support the idea of a Learner Capability Framework in a Kaupapa Māori context and emphasise the importance of personal traits such as fitting into a team. Feedback suggested that it would be helpful to present the capabilities in Te Reo Māori. In response, the Learner Capability Framework was updated to include Te Reo Māori interpretations. These are shown in Figure 5.

Otago Polytechnic Learner Capability Framework	Te Pou Tarāwaho - Kia māia
Communicates Effectively in Writing	Kia tika te tuhi
Communicates Effectively Verbally	Kia tika te korero
Communicates Effectively Visually	Kia tika te toi ataata
Displays Effective Interpersonal Behaviour	Kia tika te whanoka
Displays Cultural Competence	Kia matatau ki kā ao e rua
Displays Bi-cultural Proficiency in a NZ Context	Kia matatau ki te ao Māori
Works Independently	Kia mahi takitahi
Works in a teams	Kia mahi ā rōpū
Reflects on Performance & Applies Personal Learning	Titiro whakamuri, kōkiri whakamua
Acts Responsibly	Kia whakakoha
Practises Health & Safety	Kia haumaru te mahi
Demonstrates Digital Competence	Kia tika te mahi hangarau
Organises Effectively	Kia tōtika kā mahi
Demonstrates Resilience	Kia aro ki te kaupapa
Thinks Creatively	Kia auaha te whakaaro
Displays Leadership	Kia whakatinana te hautūtaka
Inspires Others	Kaiwhakaohooho
Enterprising	Kia kaha ki kā mahi pakihi
Practises Sustainably	Kia whakatinanatia te kaitiakitaka
Practises Ethically	Kia matatika kā mahi
Thinks Critically	Kia hōhonu kā whakaaro
Solves Problems	Kia whakatika i kā raruraru
Communicates Bilingually	Kia tika te korero ki kā reo e rua
Displays Work Life Balance	Kia konanutia te wā o te kaika, ā, te wā o te mahi
Performs Community Service	Kia hāpai i te hāpori
Participates in behaviour Change	Kia panoni whanoka

Figure 5. Te Reo Māori capability translations.

Phase 9: Interviews with Otago Southland Employers' Association, Otago Polytechnic staff and students

Previous phases of this research project validated the 25 Learner Capabilities that were important for employees to be effective members of the workforce in the 21st century. To check local employers' perspectives, Otago Southland Employers' Association (OSEA) members were invited to complete a short online survey in September 2019. To capture feedback about Otago Polytechnic student and staff impressions of using the Learner Capability framework and fully operative *iamcapable* tool[13], further interviews and a short survey were conducted.

Action research plan modification

This research phase was delayed to September 2020 due to the COVID-19 pandemic. Physical distancing required that online technologies such as phone, Skype or Microsoft Teams were used for student and staff interviews. Additional pressure on staff meant local OSEA members were surveyed online rather than New Zealand Business members as first intended. The survey comprised 11 questions to elicit information about the most important capabilities for local employers; what evidence of capabilities employers wanted to see when recruiting.

OSEA survey results

Fourteen members completed the survey[14]. Respondents were asked to select the five capabilities they deemed most important in their workplace. Table 8 shows the OSEA top 5 ranked capabilities.

Rank	Capability	N
1	Displays Effective Interpersonal Behaviour	8
	Works in Teams	8
2	Communicates Effectively Verbally	6
	Demonstrates Resilience	6
3	Solves Problems	5
	Thinks Creatively	5
	Works Independently	5
4	Organises Effectively	4
5	Demonstrates Digital Competence	3
	Enterprising	3
	Practices Ethically	3
	Practices Health and Safety	3

Table 8. Otago Southland Employers' Association - Top 5 ranked capabilities.

[13] The *iamcapable* tool was upgraded several times in 2019 to improve functionality.
[14] See Chapter 9: Learner Capability Framework: Otago Southland Employers' Association Survey Response Analysis, pp. 307-320.

Staff online survey results

Approximately one third (N=18) of the staff involved as phase 1 consented to further participation via an online survey during the COVID-19 Level 3 lockdown. Interviews included six questions focusing on academic staff perceptions of the Learner Capability Framework and its impact on relationships between employers/industry and classroom. Responses are summarised as follows.

Positives:

- For many Schools, employer relationships that had been established, or existing relationships strengthened through the participative research process.
- Some staff had adapted teaching methods and styles to meet the capability profiles and thereby increased graduate employability.
- Some staff thought that the Learner Capability Framework provided a new way of reconceptualising capabilities, and this was a positive feature for them.

Challenges:

- Ongoing assistance was required for staff, i.e., in mapping, implementing, and embedding Learner Capabilities into programme, course documents and teaching curricula.
- There was a perceived increased workload involved in implementing capabilities or assisting students to use the *iamcapable* tool.
- For some professions there was overlap with the requirements of regulatory bodies, such as the Nursing Council of New Zealand, Occupational Therapy Board etc.

Student phone survey results

Eight questions focused on understanding the student perspective of using the Learner Capability Framework and the *iamcapable* online tool/portal. Due to limited student and staff availability only six phone interviews were conducted. The following quote supports the usefulness of the *iamcapable* tool.

> "I thought it was just a great idea and kind of wondered why no one had thought of it sooner. It was easy to use, and I liked how there's the, like approval kind of thing, to just add validity to it, so yeah, I thought it was a great tool, on first impressions" (Interview 1, Lines 55-57).

Summary

A survey of local employers via the Otago Southland Employers' Association (N=14) further validated the Learner Capability Framework and identified their Top 5 capabilities. A follow-up online staff survey (N=18) identified positive aspects such as strengthening relationships with employers indicating that some had adapted teaching methods. Challenges related to the need for ongoing assistance and support for staff. A small sample of students (N=6) indicated that they appreciated and were using the Framework and *iamcapable* tool.

Discussion

The first research aim: *To identify and validate the most significant capabilities that employers seek in their potential employees for graduate level positions* was achieved through a series of interviews, surveys, workshops, and presentations of the Learner Capability Framework and *iamcapable* tool with employers, stakeholders, alumni, staff, and students over a two-year period (phases 1, 2, 3, 5, 6).

The second research aim: *To design interventions and strategies to implement capabilities into courses and curriculum content,* was addressed in phase 4.

Research question 1: Learner Capabilities
Interview data from employers and stakeholders (N=163), alumni (N=389), and members of Otago Southland Employer's Association (OSEA)(N=14) answered RQ 1: *Which capabilities or transferable skills are priorities for employers and stakeholders when they consider graduates as employees?* Interviews also cemented existing 'town-gown' relationships, built new institute-industry connections, and improved staff research interview skills.

Qualitative findings

Qualitative findings from the thematic analyses of interview transcripts indicated that employers largely value the importance of capabilities and look at them through multiple lenses – individual capabilities, i.e., what a person brings; and team capabilities - how a person can contribute to the wider capability of a workplace.

Employers stated that capabilities were more important than technical skills due to a belief that capabilities were harder than technical skills for employers to teach on the job. Problem solving was highly rated. Seen as an essential part of problem solving is flexibility and adaptability to changing circumstances, an everyday reality for many employees. Independent work is important, yet most workplaces rely on people reaching a goal through teamwork. Essentially, employers are looking for the right blend of capability, the 'right attitude' and teachability in individuals and across the team. Capabilities are a proxy for professionalism and the right attitude that is complementary to the specific workplace.

> "We always call it the 'good bastard' test but is about compatibility. Are they compatible with what we believe our company culture is, with the people they're; going to be working with… and will they fit into the team?"

Alumni highlighted the importance of effective communication. The ability to engage in conversation and communicate messages clearly to a wide range of people is vital for any workplace. Interpersonal behaviour including listening abilities, body language and ability to connect with people is important when dealing with customers, clients and team members.

Teamwork is the reality of many workplaces and builds collegiality between classmates and staff. Group work helps students to develop capabilities such as communication, cultural competency (where teams are diverse) and group level problem-solving/critical thinking. Providing opportunities for student empowerment and leadership in course assessments, and exploring ways to improve student wellbeing, were also considered important to develop capability amongst diverse learners attending tertiary institutions.

Local employers further validated the Learner Capability Framework and identified their top five capabilities as relating to effective interpersonal skills and teamwork. Staff and students provided positive and negative feedback about implementing Learner Capabilities and the *iamcapable* tool. Most challenges were resolved by further training, support and improved use of communication channels.

Quantitative findings

The Employer Priorities Index data indicated that employers highly value the 'problem solving' and 'Team-Work' capabilities of graduates, closely followed by 'Effective Verbal Communication', 'Interpersonal Behaviour', and the ability to 'Organise Effectively'. The need for new entrants to the workplace to display 'Effective Written Communication' and 'Critical Thinking Skills' is also emphasised. Personal development and reflective skills such as 'Acting Responsibly', 'Being Resilient' also featured in employer's rankings, with 'Health and Safety' capability essential for disciplines such as engineering and food design.

However, five capabilities not rated by employers were: 'Practices Sustainably', 'Performs Community Service', 'Communicates Bi-Lingually', 'Displays Work/Life Balance' and 'Enterprise.' These are concerning, particularly the sustainable practice capability, which is an integral component of Otago Polytechnic course curricula and campus culture.

For alumni, the highest ranked capability was 'Effective Verbal Communication', followed by 'Effective Interpersonal Behaviour', 'Working Independently', 'Working In Teams' and 'Organises Effectively'. In contrast, 'Problem Solving', the highest ranked capability by employers, was sixth on this list. Alumni noted the importance of teamwork and collaboration, highlighting developing this capability through academic course work. Suggestions included providing opportunities for students to work together, participate in real-life scenarios and use informal buddy or mentoring support to achieve course related objectives.

For local employers, the most highly valued capabilities were 'Displays Effective Interpersonal Behaviour' and 'Works in Teams'. Next ranked were 'Communicates Effectively Verbally' and 'Demonstrates Resilience', followed by 'Solves Problems', 'Thinks Creatively', and 'Works Independently'. These were congruent with findings from the other stakeholder groups.

Across the three groups surveyed, there is consensus about the top five most significant capabilities for entry level graduates. The overall result of the Employer Priority Index rankings across the three stakeholder groups; and the answer to the first research question is shown in Table 9.

Ranking	Employers (N=153)	Alumni (N= 389)	OSEA (N=11)
1	Solves Problems	Communicates Effectively Verbally	Displays Effective Interpersonal Behaviour
2	Works in Teams	Displays Effective Interpersonal Behaviour	Works in Teams
3	Communicates Effectively Verbally	Works Independently	Communicates Effectively Verbally
4	Displays Effective Interpersonal Behaviour	Works in Teams	Demonstrates Resilience
5	Organises Effectively	Communicates Effectively in Writing	Solves Problems

Table 9. Top 5 ranked capabilities across groups.

Key:

Capabilities prioritised in Table 9 highlight the importance of effective verbal and written communication and interpersonal behaviour. This followed by problem solving skills, ability to work independently, organise and communicate effectively in writing, and resilience for graduates. These results provide direction for academic staff teaching across programmes to include opportunities for collaborative and group work in course assessments.

All agree	Communicates Effectively Verbally (3); Displays Effective Interpersonal Behaviour (3), Works in Teams (3)
Majority agree	Solves Problems (2)
Common to all	Works Independently (1), Communicates Effectively in Writing (1), Organises Effectively (1), Demonstrates Resilience (1).

Research question 2: Capability implementation

The second research aim: *To design interventions and strategies to implement capabilities into courses and curriculum content,* was addressed by the Learner Capability mapping and implementation processes developed during phase 4 and described in Chapter 5 of the accompanying *Learner Framework: A Validation Study* publication.

Learner Capability implementation:

This process was led by Amber Paterson, a Learning and Teaching Specialist supported by an administrator and members of the Learning and Teaching team. By November 2020, the end of this project, 13 of the programme clusters had mapped some of the Learner Capabilities into their course curricula. By May 2021, all Otago Polytechnic Bachelor's programmes had mapped Learner Capabilities into their courses. Table 10 provides a summary of Learner Capability course implementation to end of May 2020.

Programme	N	Mapped	%
Bachelor Programmes	16	16	100
Graduate Diploma Programmes	24	19	79%
NZ Certificate Programmes	58	49	85%
NZ Diploma Programmes	16	16	100%
Total	114	100	88%

Table 10. Learner Capability implementation summary.

Institutional implementation strategies

The second research question: *What can Otago Polytechnic provide to assist a learner to enhance their capabilities?* was addressed by student, alumni, and staff feedback about Learner Capabilities. More work needs to be done in this regard, and a summary of the key findings and recommendations from the research participants provide direction for further action.

Student feedback on strategies to help develop capabilities included a range of suggestions, many of which are already used in courses and curriculum design. These included:

- Better preparation for realities of the workplace by including more placements,
- Using more real-life scenarios,
- Providing more internships, work experience,
- Helping to prepare Curriculum Vitae, resumé and application letters,
- Providing opportunities to practice interview technique.

Alumni ideas for empowering students in the learning environment and providing more opportunities for personal growth outside the classroom included:

- Spending more time doing collaborative work or projects in the community,
- Having smaller groups,
- More emphasis on digital literacy,
- Increasing cultural awareness.

Staff feedback and research team recommendations for implementing the Learner Capability Framework include the following suggestions:

- Prepare staff for change by including them in the process. Use workshops, seminars, and demonstrations to engage interest.
- Appoint dedicated staff to assist teachers and students to understand and use the Learner Capability Framework and *iamcapable* tool.
- Choose a suitable programme to implement capabilities. In OP's experience, diploma, and certificate programmes were the best fit. Start with implementing two or three capabilities. Increase this number as staff and students come on board. Check that they are relevant and that everyone understands them.
- Teach capabilities in a way that recognises the needs of students at different levels of experience and qualification.
- Provide a clear pathway for gaining additional qualifications or strengthening existing capabilities as students progress through their programmes of study.
- Collect feedback regularly from all stakeholders and implement change as necessary.
- Be adaptable and flexible, sharing experiences as you go.

Recommendations for students

- Embrace the opportunity to use the *iamcapable* tool to upload evidence of capability – a 'do it as you' go approach will ensure that evidence of capability is captured.
- Consider the Learner Capability Framework and *iamcapable* to be an adjunct to a traditional Curriculum Vitae; they include a richer variety of evidence in an easily transportable and online repository.
- Scan – cards, letters, emails, certificates, etc., as evidence of capability.

Contextual factors

The length of the project and disruptive factors in the educational and health environment context challenged the research team stamina and success of this project. Yet, in the face of adversity including the COVID-19 pandemic, the number of Schools using the Learner Capability Framework and number of students using the *iamcapable* tool increased dramatically over 2020 with the majority 'on board' in 2021.

Further evidence of success is evident in the fact that *iamcapable* is now being used in two local high schools, one in Canterbury, and will be trialled for staff professional development in 2021.

Conclusion

A multi-phased action research methodology was used to capture the opinions of employers, stakeholders, alumni, staff, and students about the Learner Capability Framework. The study included the *iamcapable* tool, a web-based application enabling teachers and students to track and produce verified evidence of capability development. Among the three groups surveyed the most important capabilities for successful graduate entry into the workplace were: 'Communicates Effectively Verbally', 'Displays Effective Interpersonal Behaviour', 'Works in Teams', closely followed by 'Solves Problems', 'Works Independently', 'Communicates Effectively in Writing', 'Organises Effectively', and 'Demonstrates Resilience'. There was no evidence that the capabilities differed substantially from a Kaupapa Māori perspective.

A strength of this research is the quantity and quality of data collected and analysed, indicating the willingness of employers to be involved in collaborative research. Another positive feature was the number of staff wishing to be engaged in discipline related action research. Overall, these results demonstrate that the Learner Capability Framework is 'fit for purpose' and provided reassurance that Otago Polytechnic can move forward with implementing it into curricula, knowing that employers value a range of capabilities in the people who make up their teams. Staff can be assured that employers do value capabilities, and in some cases, as much as or more than competencies.

Dissemination of research findings

The action research method provided opportunities to publicly disseminate research findings as the project progressed. Full details of the project are in the accompanying *Learner Capability Framework: A Validation Study Project Documentation* publication. Phase 1 results were shared with Otago Polytechnic staff and stakeholders via meetings, catered events, and with the wider community in the following forums.

- "Creation of an Employability Centre, a behavioural change process" presented by Andy Kilsby, ITP Research Symposium, Eastern Institute of Technology, Napier, 15 April 2019.
- Employers and Stakeholders Event showcasing the roll out of the *iamcapable* tool hosted by Leoni Schmidt and Amber Paterson at Otago Polytechnic, 15 May 2019.
- "Introduction to the Learner Capability Framework" presented by Andy Kilsby and Amber Paterson to primary and secondary schools in Otago and Southland, 20 & 21 May 2019.
- "Innovation that is good for the world: Interim findings of the Learner Capability Project", presented by Andy Kilsby to the Otago Southland Employers' Association, Dunedin, 22 May 2019.

Presentations and publications from the later research phases are included in the following list.

- "Embedding Learner Capabilities and using the *iamcapable* online validation tool to create the most employable graduates in NZ", Andy Kilsby and Amber Paterson, 28th National VET Research Conference 'No Frills', 10-12 July 2019, TAFE SA Campus (Adelaide, Australia).
- "Learner Capability Framework and Research", Amber Paterson, Industry Training Federation Conference, 15-16 October 2019, Wellington, New Zealand.
- "NZIST Covid-19 Recovery - Skills and Training Needs Group", Amber Paterson, 24 July 2020, Zoom meeting online.
- "Learner Capability: Equipping New Zealand Learners for the Changing Nature of Work", Andy Kilsby, 2020 ITP Research Symposium, 25 September 2020, online.
- "Learner Capabilities to enhance teaching and learning to produce the best graduates we can", International EPIC Conference, Amber Paterson, 27 October 2020, online.
- "Learner Capabilities to enhance teaching and learning to produce the best graduates we can", Amber Paterson, NZ Vocational Education and Training Research Forum, 12 November 2020, online.
- "How can Learner Capabilities create sustainable learners and graduates?" Amber Paterson, NZ Business and Technology Conference, 12 November 2020, online.
- A stakeholders' event presenting the Learner Capability Framework Research findings attended by research team members was held at Manaaki Restaurant, Otago Polytechnic, Harbour Terrace, Dunedin, Thursday 12 November 2019.

Peer reviewed publications

Greaves, M., & Schmidt, L. (2020). Learner Capabilities: Equipping New Zealand learners for the changing nature of work. ITP Research Symposium, (online 24-25 Sept), published in *Kotahitanga: Hemahingā tahi - Working in partnership to improve outcomes for learners and communities,* **Book of abstracts**, p. 37.

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Appendix: The Learner Capability Framework

Framework capabilities & behavioural indicators

01. Communicates effectively in writing

BEHAVIOURAL INDICATORS (I AM ABLE TO...)

1. Use different styles and types of written language appropriately to convey information.
2. Apply appropriate tone, and writing style to meet audience needs.
3. Read and understand written text and figures.

02. Communicates effectively verbally

1. Use verbal language appropriately for a range of purposes and audience needs.
2. Convey thoughts and ideas effectively using oral communication skills. Use different styles and types of verbal language to convey information and apply appropriate language and tone to meet diverse audiences.
3. Discuss current issues, service and ideas. Respond to questions about my work applying appropriate language and tone.

03. Communicate effectively visually

1. Use different methods and styles of visual language to communicate effectively to an audience.
2. Convey culturally appropriate ideas and information in visual forms.

04. Displays effective interpersonal behaviour

1. Listen actively and observe different points of view before making decisions.
2. Interact with other people using appropriate facial expressions, body language and hand gestures.
3. Discuss difficult issues with colleagues. Work collaboratively to reach a suitable agreement. Adjust thinking and overcome conflict.

05. Displays cultural competence

1. Treat people with respect. Include and value different cultural perspectives in various contexts.
2. Understand the difference in customs, practices and beliefs across other cultures and engage appropriately.
3. Take responsibility and manage my own behaviours using a range of personal and interpersonal skills in diverse cultural contexts.

06. Displays Bi-cultural proficiency in a NZ context

1. Demonstrate a range of tikanga Māori (i.e. protocols, customs and values).
2. Incorporate Māori perspectives environmental, social and legislative decision-making processes in the workplace.
3. Demonstrate an understanding of individual and collective responsibilities in relation to the principles of the Treaty of Waitangi, particularly with regard to mana whenua.

07. Works independently

1. Self-start and organise to meet agreed deadlines. Initiate and prioritise tasks without supervision.
2. Adapt to new and changing situations. Operate outside my 'comfort zone'.
3. Receive and act on instructions and advice from workplace supervisors, instructors and mentors.

08. Work in teams

1. Build, trust and collaboration, and defining measures of success.
2. Work collaboratively to plan and complete projects and tasks by agreed deadlines.

09. Reflects on performance and applies personal learning

1. Examine my personality, values, beliefs, needs and emotions. Consider how my personality impacts on my performance and how others perceive me.
2. Evaluate performance and reflect on performance feedback from several sources. Explore how to improve performance and implement changes.
3. Identify and pursue learning opportunities to change and increase skills, knowledge and performance.

10. Acts responsibly

1. Anticipate and respond proactively to customer, client and colleague needs.
2. Keep promises and honour commitments to customers, clients and colleagues.
3. Accept the consequences for what I do and say. Avoid making excuses for actions and blaming others when things go wrong.
4. Accept responsibility for projects and the impact on communities, including biodiversity.

11. Practises health and safety

1. Follow prescribed checklists to ensure workplace safety is maintained. Identify potential safety risks and alert appropriate supervisors.
2. Comply with all current health and safety procedures. Take preventive measures to avoid mistakes and alleviate risk.
3. Reduce risk to personal health and safety through demonstrating awareness of different situations and contexts.

12. Demonstrates digital competence

1. Choose and apply digital technology, tools and software to complete work-based tasks.
2. Access, produce, edit and upload information using digital technologies.
3. Apply social media technologies to appropriately present your business and professional capability.
4. Apply measurement and calculation to provide accurate information and analysis.

13. Organises effectively

1. Achieve outcomes through working with appropriate authority and decision-making channels. Evaluate results to check intended outcomes are achieved.
2. Improve and manage workplace physical environments.
3. Achieve work requirements and tasks through planning, prioritising, structuring time and attending to details.

14. Demonstrates resilience

1. Maintain wellness and apply personal strategies to respond to pressure of time, workload, conflict and work-life balance.
2. Persevere and learn constructively through challenges and mistakes. Constantly re-evaluate and establish the best course of action.
3. Maintain optimism, perseverance and flexibility in uncertain, risky or complex situations. Reduce personal and team stress, conflict, and negative impacts.

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15. Thinks creatively

1. Embrace new ideas to advance, shape and support progress within my profession and industry.
2. Use curiosity and initiative to anticipate future needs. Develop resourceful solutions to issues, problems and new opportunities.
3. Test and evaluate solutions to work through problems, products, or new methods for delivering service. Build, transform and re-construct new models or examples.

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16. Displays leadership

1. Communicate a vision for a project or business. Make collaborative decisions on challenging issues and explain decisions to guide change, and delegate the course of action.
2. Coach and support emerging leaders and recognise different styles of leadership.
3. Motivate, influence and co-create through listening, communicating and establishing expectations. Value other people's efforts.
4. Challenge and resolve inappropriate or unproductive behaviour in a polite, respectful manner. Use formal systems and processes when appropriate.

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17. Inspires others

1. Encourage and motivate others through communicating purpose, meaning and passion. Inspire others to seek opportunities, invest effort and take calculated risks.

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18. Enterprising

1. Visualise a new opportunity that makes a significant difference to something or someone. Identify what is required to start this initiative.
2. Bring energy, tenacity, initiative and desire to succeed in a project or task with other people.
3. Achieve bold new outcomes with others. Contribute towards dynamic and adventurous behaviour.
4. Focus on meeting the needs of specific groups by undertaking important projects. Work collaboratively with stakeholders to achieve bold and creative outcomes.

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19. Practise sustainably

1. Identify initiatives to achieve better environmental, social, cultural and economic outcomes in the workplace so they reduce our impacts on the environment and people.
2. Advocate for positive change at either a community, industry, professional, national or global level. Provide supporting evidence for change by showing how specific impacts could affect the environment and people.
3. Implement and improve sustainable practice in the workplace, my profession and community by collaborating and acting with others.

20. Practises ethically

1. Make honest, effective and fair decisions through applying ethical principles and shared values.
2. Identify and adopt appropriate codes of practice to maintain high professional standards in the workplace. Show fairness when working with others to do the right thing.
3. Maintain the confidentiality of formal and informal communication between yourself, clients and colleagues.

21. Thinks critically

1. Identify and take up opportunities. Expose and overcome obstacles.
2. Analyse and evaluate information drawn from research and professional best practice and act on conclusions.

22. Solves problems

1. Identify the difference between problems, symptoms and underlying causes of a problem.
2. Collaborate to apply new ways of thinking about problems. Identify different solutions, interventions or actions to address problems.
3. Reframe problems as opportunities and learn from them.

23. Communicates bilingually

1. Speak and comprehend an alternative language.
2. Write, read, speak and comprehend an alternative language.

24. Displays work life balance

1. Enjoy a healthy, balanced lifestyle. Manage work activities according to priorities. Engage in personal recreation or leisure activity.
2. Keep work in perspective. Demonstrate a sense of humour that is appropriate for the workplace.

25. Performs community service

1. Build and develop ties with communities through supporting people, volunteering, coaching, service learning and participation.

26. Participates in behaviour change

1. Map issues and behaviour to clarify and diagnose real problems instead of the symptoms of problems.
2. Identify possible interventions that could be implemented to create change.
3. Advocate and present a case for change that aligns to specific values and desired behaviours.
4. Implement strategies that model the changes your community, business or organisation would like to see.

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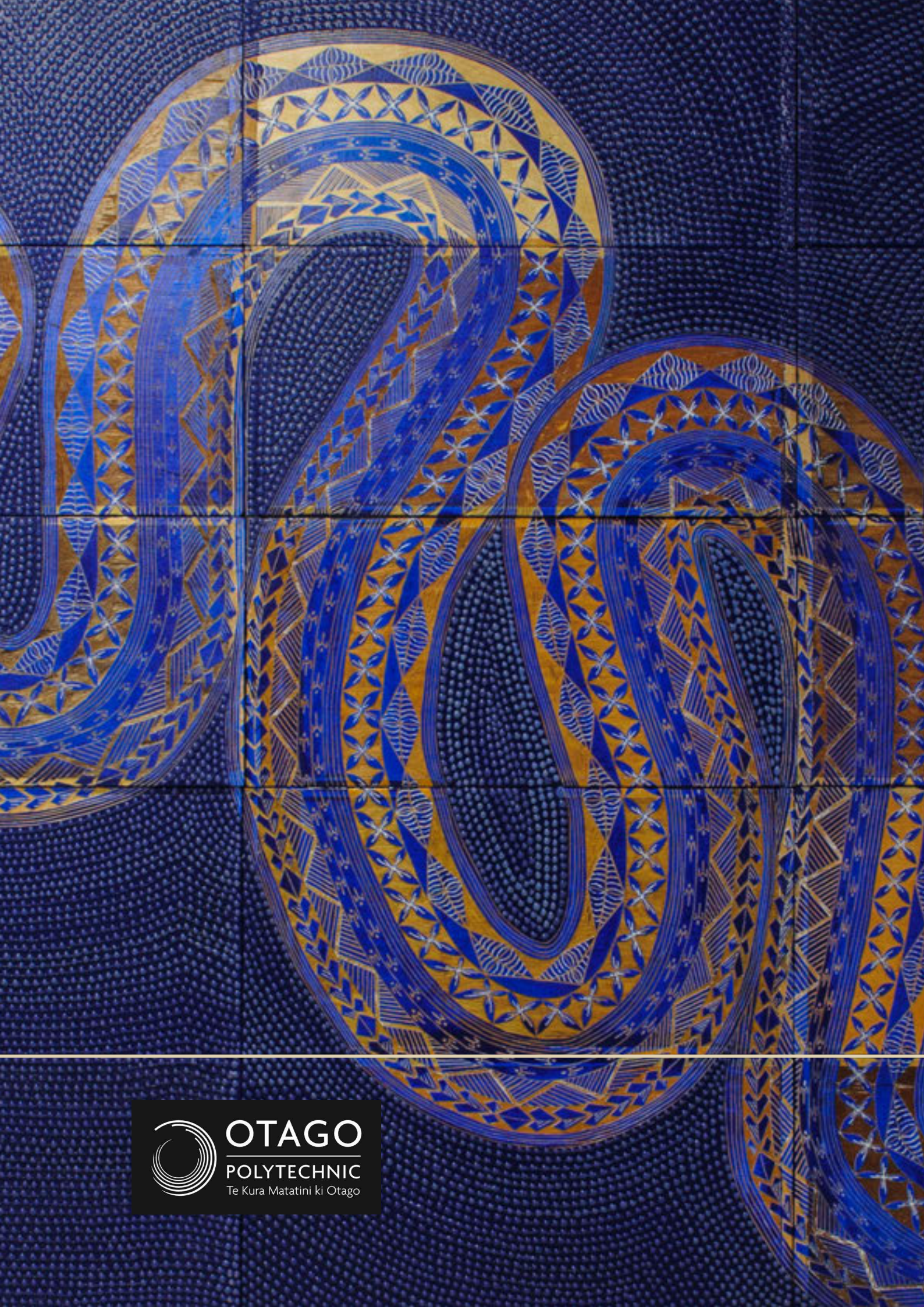

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